

Date: Friday, 13/03/2009 4:44:35 PM
 User: Julie Dawson

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: FWD X-TUBE EXTENDED HEIGHT GEAR (-011)
Job Number	: 44268		
Estimate Number	: 10007		
P.O. Number	:	Part Number	: D205596101
This Issue	: 13/03/2009	S.O. No.	:
Prsht Rev.	: NC	Drawing Number	: D205-596-101
First Issue	: 23/12/2008	Project Number	: N/A
Previous Run	: 41263	Drawing Revision	: B
		Material	:
Written By	:	Due Date	: 27/03/2009
Checked & Approved By	: <u>JU009.03.13</u>	Qty:	1 Um: Each
Comment	Est Rev G Removed Bending 05-10-25 JLM Est Rev H ECN 1075 08-01-10 DD Est Rev I 08.04.28 Added bending & mat'l EC verified by: DD Est Rev J 08-08-19 remove QC4 DD verified by: EC		

Additional Product

Job Number:



Seq. #:

Machine Or Operation:

Description:

1.0

DC

DOCUMENT CONTROL



for JD 09/02/02



Comment: DOCUMENT CONTROL ECN 09-524 added 09/02/18
 Photocopy D205-594 bluefile & type labels per PPP D205-596-101 CHG002

50964/07

2.0

D6005180

Crosstube Material



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Crosstube Material

Batch: *B-38345*

MB 09-03-25

①

3.0

BENDING

BENDING MACHINE - SKIDTUBES

**Comment:** BENDING MACHINE

Bend as per Dwg D2889 using CNC bender program

MB

09-03-25

①

4.0

CROSSTUBES

CROSSTUBES RESOURCE 1

**Comment:** LANDING GEAR RESOURCE 1

Mark 31.53" for cutting from tangential line in the straight section from D2889 as per Dwg wall template

Identify off-cuts with batch number & part number and bring them to cnc lathe

9-3-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 13/03/2009 4:44:36 PM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FWD X-TUBE EXTENDED HEIGHT GEAR (-011)

Job Number: 44268

Part Number: D205596101

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC15

DIMENSIONAL CHECK OF X-TUBES



Comment: DIMENSIONAL CHECK OF X-TUBES

S 02/03/25 (A)

6.0

CROSSTUBES

CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Cut as per Dwg D205-596-101

9-3-25

2-Deburr & Inspect for surface damage. Polish cut surface. Scribe part # and end of tube.

Batch # on one

AWM 9-3-25 (1)

7.0

QC15

DIMENSIONAL CHECK OF X-TUBES



Comment: DIMENSIONAL CHECK OF X-TUBES

S 02/03/30

8.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat per QSI 005 4.1

AWM 9-3-25 (1)

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 02/03/30 (A)

10.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

Prime inside and outside with Immron per QSI 005 4.2

ET 09-04-02

11.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

09 04 03

(1)

12.0

D3595063450

RUBBER CUSHION



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

RUBBER CUSHION
batch 43210

ET 09-04-06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 13/03/2009 4:44:36 PM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FWD X-TUBE EXTENDED HEIGHT GEAR (-011)

Job Number: 44268

Part Number: D205596101

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

MS2192025

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Clamp(per MIL-DTL-8783C)

batch 109643

RT 09-04-06

14.0

D28931

2.75 Support



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Support

Pick:

Qty Part number Description Batch

2 D2893-1

Support

42353

RT 09-04-06

15.0

CROSSTUBES

CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe

2- Apply magnobond 6398 as per dwg D205-596-101.

Magnobond 6398 Batch: 111249

EXP: 10-02-01

RT 09-04-06

3 - install supports and clamps as per Dwg D205-596-101. Torque clamps to 80-100 in lb. as per dwg

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Signature (X)

17.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-596-101

Location: 6

Signature (1)

18.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/04/08

Job Completion



MF
09-04-07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

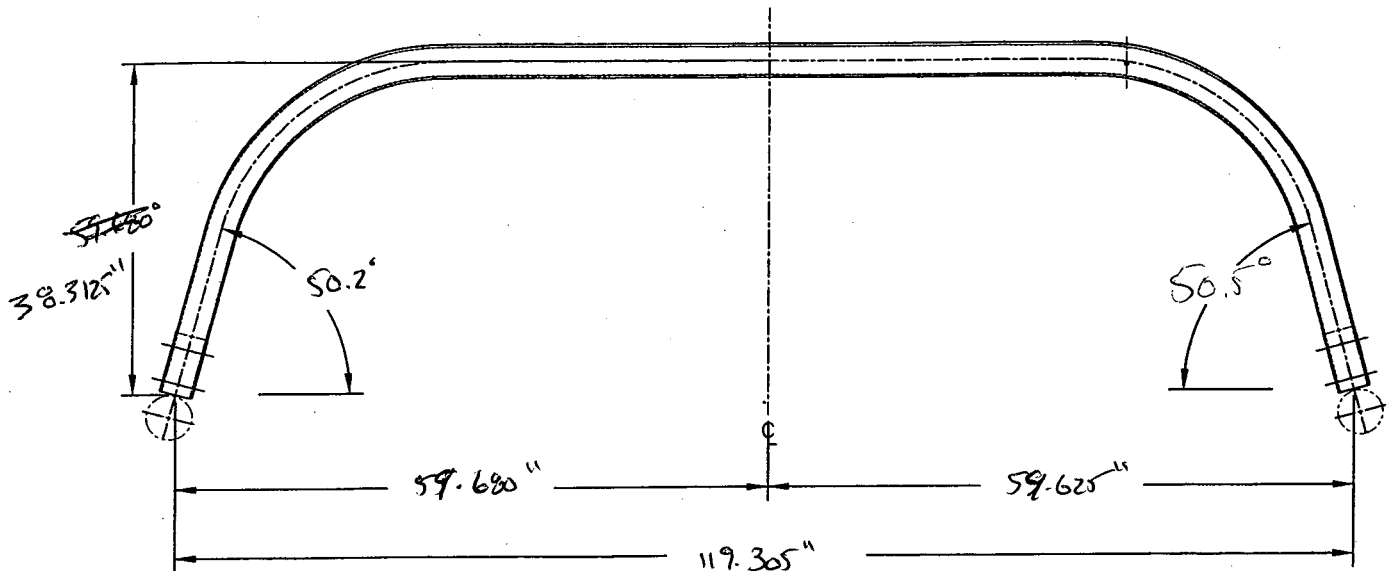
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 44268
Description: Crosstube High-High Fwd		Part Number: D205-596-101
Inspection Dwg: D205-596-101 Rev: B		Page 1 of 1

Required Dimension	Min	Max
Height	38.2	38.4
1/2 Span	59.5	59.7
Angle	49	52
Total Span	119.0	119.4



Comments

QC15 Inspection	S
Date	02/03/25

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	08.04.21	Dwg Rev updated	KJ/JM	

PARTS LIST:

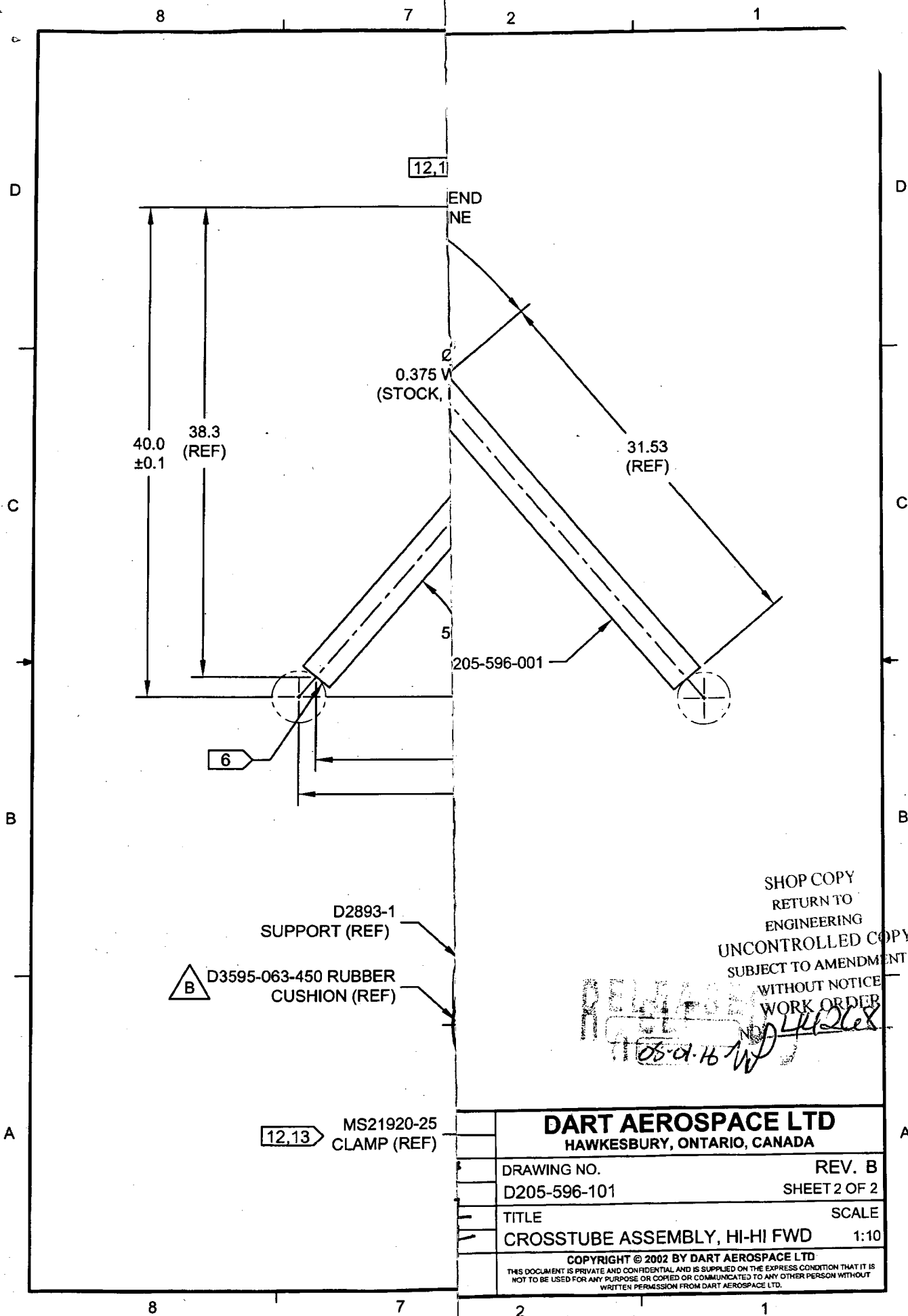
Qty	Part Number	Description
X	D205-596-101	CROSSTUBE ASSEMBLY, HI-HI FWD
1	D6005-180	CROSSTUBE
2	D2893-1	SUPPORT
4	D3595-063-450	RUBBER CUSHION
4	MS21920-25	CLAMP
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURE FROM D6005-180
FINISHED LENGTH = 149.60 ± 0.02
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART 005 4.2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH
VIBRATING STYLUS
- 7) WEIGHT: 44 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO
BENDING IS 6% BASED ON O.D.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) APPLY A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2893-1 THAT
WILL BE IN CONTACT WITH THE CROSSTUBE. LET CURE FOR 12 HOURS AFTER INSTALLATION
AND PRIOR TO PACKAGING.
- 12) INSTALL MS21920-25 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE D2893-1 SHOP COPY
SUPPORT ON THE TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE RETURN TO
CROSSTUBE SUPPORT. ENGINEERING
NOTE: IT IS ACCEPTABLE TO SUBSTITUTE MS21920-25 CLAMPS WITH LONGER (MS21920-26) OR CONTROLLED COPY
SHORTER (MS21920-24) CLAMPS TO ACCOMMODATE VARYING DIAMETERS. ENSURE THERE IS A AMENDMENT
MINIMUM OF 1.5 THREADS IN SAFETY ON THE NUTS.
- 13) TORQUE CLAMPS 80 TO 100 IN-LB

RELEASED
11/02/01 16:14 WFO 44268
WITHOUT NOTICE
WORK ORDER

B	SUPPORT NOW MAGNOBONDED; REMOVE D2856-600-851 ABRASION STRIP; UPDATED NOTES; ADDED D3595-063-450 CUSHION; MS21920-25 WAS MS21920-24	MB	07.12.03
A	NEW ISSUE	DS	02.05.27
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D205-596-101	SHEET 1 OF 2
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	CROSSTUBE ASSEMBLY, HI-HI FWD	NTS
DATE	07.12.03	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D205-596-101 REV. B
SHEET 2 OF 2

TITLE CROSSTUBE ASSEMBLY, HI-HI FWD SCALE 1:10

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